

What Is Claimed Is:

1. A bull gear of a differential gear assembly, comprising:
a ring gear for inputting torque from a transmission; and
a support member supporting a differential pinion and supported on an axle, the support member transmitting the torque from the ring gear to the axle through the differential pinion, wherein the ring gear and the support member are toothed to be coupled together so as to be relatively axially shiftable and not-relatively rotatable.
2. The bull gear of a differential gear assembly as set forth in claim 1, wherein the ring gear is stronger than the support member.
3. The bull gear of a differential gear assembly as set forth in claim 2, wherein the support member is made from sintered powder metal.
4. The bull gear of a differential gear assembly as set forth in claim 3, wherein the ring gear is made of steel.
5. The bull gear of a differential gear assembly as set forth in claim 3, wherein the ring gear is made from sintered powder metal.
6. The bull gear of a differential gear assembly as set forth in claim 1, the ring gear having a toothed outer periphery and a toothed inner periphery, wherein one of the toothed outer and inner peripheries serves as an input gear for receiving torque from the transmission, and wherein the other toothed outer or inner periphery meshes with the toothed portion of the support member so as to couple the ring gear with the support member.
7. The bull gear of a differential gear assembly as set forth in claim 1, the ring gear having a toothed outer periphery and a toothed inner periphery, wherein either the toothed outer or inner periphery serves as an input gear for receiving torque from the transmission,

and wherein both of the toothed outer and inner peripheries mesh with the toothed portion of the support member so as to couple the ring gear with the support member.

8. The bull gear of a differential gear assembly as set forth in claim 7, the ring gear having an annular recess into which the ring gear is fitted, wherein the recess has a toothed outer periphery and a toothed inner periphery for meshing with the toothed outer and inner peripheries of the ring gear, respectively.

9. The bull gear of a differential gear assembly as set forth in claim 8, the ring gear being divisible into halves each of which has the annular recess, wherein the halves are joined to each other so as to fit the ring gear in the mutually facing recesses, thereby forming the support member holding the ring gear.

10. The bull gear of a differential gear assembly as set forth in claim 1, the ring gear having a first surface perpendicular to the axle, and the support member having a second surface to be leveled with the first surface of the ring gear, further comprising:

a retaining member abutting against the first and second surfaces so as to prevent the ring gear and the support member from relatively axial shifting.

11. The bull gear of a differential gear assembly as set forth in claim 10, wherein the retaining member is provided on a pinion shaft supporting a pinion for transmitting torque from the transmission to the ring gear.

12. The bull gear of a differential gear assembly as set forth in claim 10, further comprising:

a screw screwed into either the ring gear or the support member, wherein the retaining member is a washer provided on the screw.

13. The bull gear of a differential gear assembly as set forth in claim 10, the outer member being divided into a plurality of pieces, wherein a plurality of the retaining members are provided to the respective pieces of the outer member.